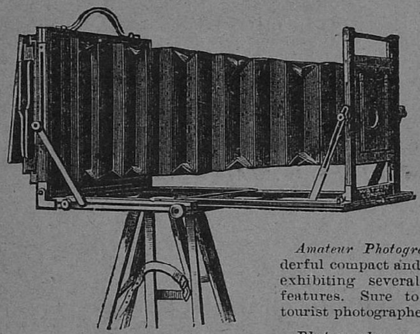
Journal of the Amateur Photographic Society of Madras.

Vol. 3.—No. 6. | Price As. 8.

May, 1897.

HIGHEST CLASS PHOTOGRAPHIC INSTRUMENTS.

WATSON'S ACME TOURIST'S CAMERAS & RECTILINEAR LENSES.



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Camera and three double slides	9 12 0	10 0 0	12 5 0	14 0 0	16 12 6	21 0 0
Rapid Rectilinear Lens with Iris diaphragm	4 0 0	4 10 0	5 0 0	6 15 0	8 15 0	11 10 0
Solid Leather Travelling Case with spring lock ...	1 15 0	1 15 0	2 2 0	2 10 0	3 0 0	3 15 0
Rotating Turntable in base, and Tripod Stand ...	2 2 0	2 2 0	2 2 0	2 10 0	2 15 0	3 3 0
	17 9 0	18 7 0	21 9 0	25 15 0	31 2 6	39 8 0

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Brass binding extra—recommended for India.

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£1 10 0	£1 15 0	£2 0 0	£2 10 0	£3 0 0

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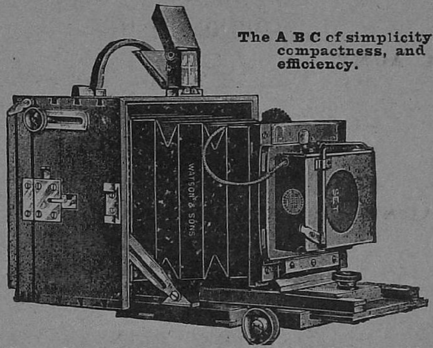

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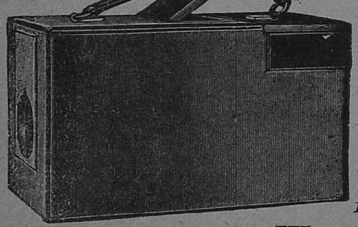

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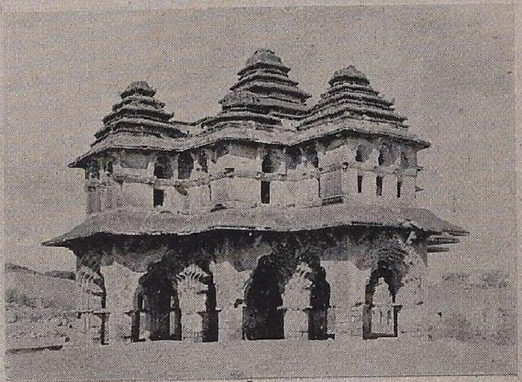

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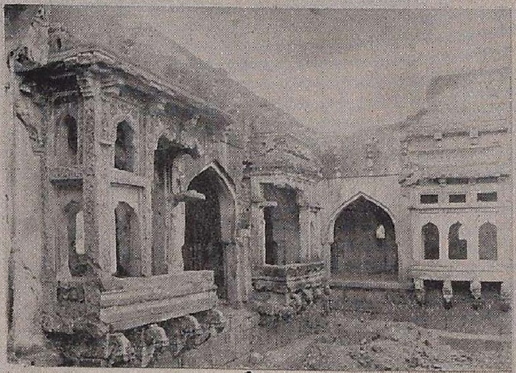

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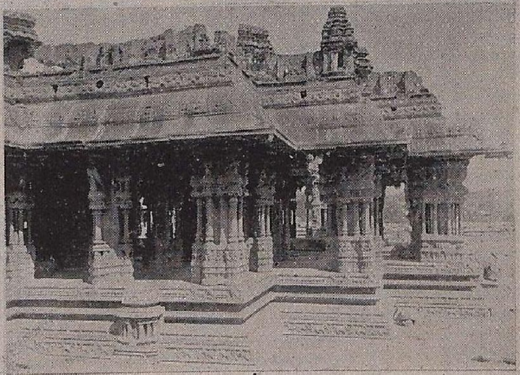

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VIEWS AT HUMPI.

Processed by Thacker, Spink & Co., Calcutta.

Vol. III. No. 6. **May, 1897.**

Journal of the Amateur Photographic Society of Madras.

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EDITORIAL NOTES.

THE patent specification of M. Chassagne's method of colour photography has been published. It will be remembered that his method consisted of making a negative in the usual way upon a gelatine plate, previously treated with one of his secret solutions. The print or transparency taken from this negative was next treated with several solutions in succession, when appropriate colours were taken up by the various parts of the positive. The formulæ for these solutions have now become public property and their complexity masks the real nature of their action.

According to the published statements, there appear to be five solutions, No. 1 being called "shadows albumen." This is composed of 200 grammes of blood albumen disolved in ½ a litre of water, into which is subsequently stirred another ½ litre of water mixed with 1 gramme of each of the chlorides of platinum, sodium, palladium, ammonium, iron, chromium, cobalt, gold, tin, barium, nickel, strontium, cadmium, mercury, and silver. A few more ingredients contained in this solution are sulphate of soda, oxalic acid, a little hæmoglobin, and 10 grammes of hydrochlorate of cocaine. The other four solutions are made up of various proportions of No. 1 solution with different ingredients, such as picric acid, chromic acid, formic acid, caseine, common salt, carmine of indigo (whatever this might be), chlorides of nickel, copper, &c.

These solutions he names respectively *relief albumen, blue pigment, green pigment, red pigment.* For use, the positive is first treated with 'shadows albumen,' next with 'relief albumen;' then the blue pigment is brushed on followed by shadows albumen; then the green pigment diluted with both albumens, then the relief albumen, and finally the red pigment diluted with relief albumen, followed by shadows albumen.

It is more than highly probable that many of the ingredients have no share whatever in the production of the results achieved, and that

the published fomulæ are based on empiricism. To separate the wheat from the chaff in these mixtures and to determine the real conditions under which they exert their peculiar action will involve a series of complicated and prolonged investigations. The colour effects are stated to be somewhat similar to those produced by hand coloured photographs, and the main point of scientific interest would appear to be the peculiar action which seems to govern the distribution of colour on the positive, the image apparently exercising a "selective absorption."

WE drew attention last month to the Bichromated gum process of printing, and we extracted into that issue two articles describing the process very fully. There has been a good deal of literature lately on the subject, and there are promises of more to follow. Some of the difficulties connected with the process are summarised by the *Amateur Photographer.* The pigments to be used in the earlier attempts, until expertness is attained, should be limited to burnt sienna and the various carbon blacks, lampblack being at the head of the list, It also appears that the very rough English drawing papers tend to give muddy prints, and smoother drawing papers are recommended for ordinary work. The best class of negative for this process is said to be a soft and transparent one, such as that which yields the best results in enlarging. The most convenient method of working is said to be to make a 40 per cent. mucilage of gum, to which is added carbolic acid as a preservative in the proportion of one drop of it to each ounce of mucilage. The required amount of colour is now mixed with 10 per cent. solution of bichromate of potassium, and for ordinary use equal parts of both liquids are mixed. Softer pictures are obtained by increasing the proportion of gum.

THE recent accidents from explosions of Acetylene have led to legislation with reference to it, both on the Continent and in England. The most recent restriction has been the bringing of calcium carbide (the compound from which Acetylene is formed when it is placed in contact with water) within the operation of the English Petroleum Act. From the 1st April last, calcium carbide could not be stored or kept for sale except under a license. The restriction applies to dealers and others who keep the carbide in large quantities; and it does not apparently apply to small consumers any more than the restrictions as to storage of kerosine oil applies to the ordinary consumer. The retail price of the carbide will no doubt go up a little; but the difficulty at present appears to be to get the pure carbide at all. Some published results of experiments made with a view to testing the comparative value of oil, acetylene, and the Welsbach incandescent gas light, point decidedly in favour of acetylene as regards purity and intensity of light. There appears to be every prospect of acetylene coming into more extended use as an illuminant, where the lime-light and the arc light are out of the question.

AN amusing "commination" is pronounced by 'Il Pipistrello' in the *Journal of the Photographic Society of India*, upon those who continue the employment of uranyl salts in photography, after the deterrent warning which he gives them. The picture which he draws of the insidious action of these poisonous salts, "leading up by stages, through defective nutrition, to hæmorrhage of the liver and the heart" is enough to frighten any one. But thinking that the 'leading up of the poison to the heart' may not be sufficiently awful to the fanatic, he gives his readers a parting broadside by informing them that uranyl nitrate belongs to the "so-called protoplasmatic class" of poisons. It is quite true, as he says, that the druggist who dispenses sulphocyanide of ammonium or perchloride of mercury will put a "Poison" label on the bottle, while this label will be omitted if a uranyl salt is dispensed. But he overlooks that chemists and druggists are guided in such matters by the list of scheduled poisons in the Poisons Act. While a caution as to the poisonous properties of uranyl salts would be quite proper, we cannot agree to the dictum implied in the "commination" that these salts should be completely banished from the home of the photographer. To be logically consistent, we should have to banish from our homes perchloride of mercury, oxalate of potash, pyrogallic acid, the bromides, the cyanides, the strong acids, and ammonia. If it were unsafe to be dipping the fingers into a toning solution of a uranyl salt on account of its becoming absorbed in poisonous quantities through the skin into the system, then that would certainly be a reason for discountenancing its use. But this is not stated to be the case, although something of the sort seems to be hinted at when it is stated that the

uranyl salts have a "slow subcutaneous action." This however would be a recommendation in their favour, since poisonous substances when introduced 'subcutaneously' act far more rapidly than when introduced in many other ways. Although these salts have been in use for many years, no cases of accidents from them seem to have been recorded, from absorption through the skin or in any way, while cases of fatal poisoning from other photographic chemicals in daily use can be easily referred to.

It is quite probable that the majority of photographers do not appreciate the highly poisonous nature of uranyl salts; but that there is more danger in using them with ordinary care than there is in the careful use of ferridcyanide of potasium, oxalate of potash, or perchloride of mercury has not been distinctly affirmed. Please Mr. Pipistrello, would you kindly tell us the class of poison to which your favourite developer "diamidophenol" belongs? Phenols and amides sound poisonous to ordinary beings, and a double barrelled amide of phenol is really quite alarming!

A new transferrable albumen paper, called "Novitas" is the latest thing in papers. Some time ago we tried a transferrable bromide paper; but the film would not tranfer when wanted to, or melted or stuck when not wanted to. We have not seen this paper advertised recently and have been wondering whether its manufacture has been discontinued. The new paper is an albumen paper, suitable for opals, transparencies, enlargements, or for lantern slides. The working of it is said to be simplicity itself; but there is some doubt expressed as to its permanence. As an "intermediate" for making enlarged negatives its value is undoubted.

THE last day for sending in exhibits for the next half yearly competition is the last day of this month. We would again state that the prescribed subject:—"An Architectural Study" is not compulsory for enlargements and in this connection we would draw attention to the Rules which are printed on the last page of each issue of the journal.

OUR Illustration is intended to accompany the article on "Humpi" published in this issue under the well known initials: F.D.—The little numeral underneath each picture is to facilitate reference from the text. We trust that other members will take the lead from F. D., and send us descriptive articles of places which have been investigated with the camera.

A VISIT TO HUMPI.

BY F. D.

The following are a few notes jotted down during a recent visit to the ruined city of Vijayanagar; and in the hope that others of our Society may be induced to follow in my footsteps, these notes are sent on to our Editor.

Leaving Madras by the N.W. Mail at 6-10 P.M., one arrives at Guntakul junction at 7-17 A.M. next day. Here you get 33 minutes for chota-hazri and then join a Southern Mahratta train on the other side of the platform and leave at 7-50 A.M. for Hospet, 70 miles away.

Hospet is reached at 1-26 P.M. and here you can breakfast very well in the Refreshment Room at the station. Conveyance should have been ordered in advance; the choice appears to be between a pony jutka (so-called) and the ordinary bullock cart. From personal experience of both I strongly recommend the ordinary bullock cart which, with plenty of straw and a rug on the top of that, will take you comfortably to Kamalapur Dak Bungalow (half a mile from the nearest buildings of Vijayanagar) in less than two hours.

Conveyances can be obtained either through the Station Master, Hospet, or the Tahsildar of the same taluq.

Getting to Kamalapur about 4 P.M., I should advise the visitor to spend the first evening in looking over the buildings that are within a mile or so of the Dak Bungalow. You first come across the Queen's Bath, then walking across the fields of sand and rock, you see the Elephant Stables, Concert Hall, so called (more probably a Dewan-i-Khas such as one sees at Delhi, Agra, &c.), zenana buildings, Council Hall, and sundry temples of various sorts and sizes, the principal of which is known as Hazara Ramachendraswamy's. Most of these views are afternoon pictures so far as photography is concerned, but perhaps after all it will give the intending visitor a better idea of what he should do if I relate the details of our visit exactly as they occurred.

We arrived at Hospet about 2 A.M., and having our sleeping carriage detached and put in a quiet siding we finished our night's rest in peace. Up at 7 A.M., we had chota-hazri, our luggage was placed in one bullock cart together with our servants, and one of us mounting his bicycle and the other a second bullock cart we started off about 8 A.M. for Kamalapur. The bicycle beat the bullocks by 20 minutes.

While breakfast was being prepared (it had been ordered a few days in advance by note to the butler in charge, Travellers' Bungalow, Kamalapur, Bellary district) we had a walk round the buildings which were close at hand. Breakfast was then the order of the day and after a satisfying meal and a rest, we started off at 2-30 P.M. with our cameras. Our joint kit consisted of 2 half plate cameras, one $\frac{1}{4}$ plate, and one hand camera (the last of which was never used), 5 lenses of sorts, 5″ to $8\frac{1}{2}$″ focus and some shutters, none of which were wanted; one of the half plate cameras could also be used for stereo purposes.

We opened fire upon a general view of the ruins (fig. 1) of the palace buildings which make a picturesque heap, then the Elephant Stables were taken; these consist of a range of stalls, the entrances to which are pointed arches; over each stall is a dome, all of different designs and in the centre of the row is a three-storied structure, where possibly the attendants lived.

The Concert Hall is not a pretty building and received no attention from our cameras; it is a long, narrow, low building divided along its front face by a series of arches; in front is a spacious maidan (at present more or less covered with heaps of stones—as indeed is pretty well all the country) upon which probably sports and exercises took place in the olden days and one side of which is bounded by a wall against which is built a tall tower from which the zenana ladies probably looked on at the games.

The next building, after leaving the zenana which (with the exception of the above-mentioned tower) is entirely in ruins, is the Council Chamber (fig. 2); this is a brick and stone building, the lower floor of which is built in a series of arches like the crypt of a cathedral; the upper floor is open, but only a very limited number of councillors could have met at one time; the exterior is decorated with floral and geometrical patterns in raised polished chunam work.

There are several walls round the city, most of which are in ruins, and between the Council Hall and the Hindu temple, to which we next went, there is a very picturesque view to be got of the ruined walls with the Council Hall and zenana buildings in the background.

The Hindu temple, said to have been dedicated to Hazara Ramachendraswamy, is very much like those in other parts of Southern India—a square or oblong courtyard with a mantapam and a receptacle for the idol.

There are bands of sculpture in excellent preservation round the outside of the temple; in the mantapam there is not much to be seen beyond four polished black stone pillars (distinctly Dravidian in style) which are carved in a very satisfactory way. We discovered by accident that these black polished pillars give a double reflection of anything held up in front thereof; this fact is not noticed in any of the guide books we have come across.

The courtyard of this temple, with the mantapam porch in the foreground, makes an exceedingly pretty picture at about 5 P.M.

From the temple we wended our way towards the Queen's Bath (fig. 3), passing on the road a massive square pile of masonry decorated with bands of sculptured elephants, &c., round all four sides—the people call it a throne, but at present there is no sign of there having been a seat on the top, which is about 20 feet high; the Queen's Bath is a square building plain on the outside, but with a verandah round all four sides of the interior and balconies extending over the floor of the bath, which was apparently some 5 or 6 feet below the verandah floors; there are signs of steps having been there at one time, but the whole floor of the bath is now a litter of lumps of chunam, stones and dust; the balconies were decorated with geometrical designs of polished chunam in relief, but the greater portion of some and the whole of others have been destroyed and only in two or three places are there sufficient remnants to show how pretty the effect must have been originally.

Water appears to have been brought from the river Tungabhadra, a distance of 2 to 3 miles, and there still remain fragments of the aqueduct which consist of stone troughs raised on roughly-cut stone pillars.

The time was now past 6 P.M., so we packed up our traps and returned to the bungalow where the programme was tea, tub, change

plates, dinner, smoke, bed; the night was not a cheerful one, the heat was very great and the mosquitoes were there in thousands; in fact, in some places the wall was positively black with them. A punkah was tried, but the punkah-wallah slept peacefully; a removal of the cot into the compound had a better effect, but one's rest was disturbed by visits from flying-foxes, donkeys, &c.

Everything comes to an end at last and so at 6-30 A.M. we were sitting at chota-hazri discussing the various incidents of the night and forgetting all our miseries.

Coolies with the camera and the inevitable tiffin-basket were sent on to Vittalasawmy's temple on the banks of the Tungabhadra about 4 miles away and we soon followed in a pony-jutka which had been provided for us as a great treat; the conveyance was not a success and we recommend future visitors to use bullock carts only or else, which is preferable, trust entirely to their own legs.

The road from the bungalow to the river winds a good deal in and round ruined buildings of sorts for about 2 miles; nearing the town of Humpi, now practically deserted, we found plenty of wet cultivation going on, the water coming by irrigation channels from the Tungabhadra river.

On getting to the banks of the Tungabhadra the scenery was magnificent, and had the cameras not been sent on to Vittalasawmy's temple, an hour or more could have been well spent along the mile of bank in taking photographs. On both sides the river is hemmed in by masses of rock, there being in some places a mass of solid rock and in others huge heaps of rocks of all sizes; the sun was just in the right place and there were sufficient clouds in the sky to complete the picture. Unfortunately on our return about 2 P.M. light and shade had entirely altered, and the views were comparatively flat; any one who happens to be on the spot on the 10th February in future years at 9 A.M. may depend upon having the sun in the right quarter which is one very essential point in picture-making.

On arriving at Vittalasawmy's temple it was very plain that a good half day's work lay before us and from 9-30 A.M. to 1 P.M. we were very busy taking plain photographs and stereos of as many of the principal features as we could manage. The temple consists of the usual mantapams within a court-yard, and gateways on three sides.

The large mantapam (fig. 4) is a particularly fine piece of work, sculptured bands running round the base and carved stone pillars supporting the roof; these pillars apparently are one block of granite each, a central shaft being left and the outside parts of the blocks being cut into small detached pillars very elegant in shape and dimensions; the outside row of pillars have their faces cut into the usual animals with riders and beasts of sorts, showing a considerable amount of imagination; some of them are apparently the results of nightmare!

The smaller mantapam is not so elaborately worked out, but we found two figures which might well have been taken for modern representations of the great Napoleon and William Shakespeare! The former is very like—the peculiar cocked-hat and greatcoat being exactly as shown in battle-scenes—while Shakespeare's likeness is perfect; these are on the pillars carved in relief and can scarcely be missed.

The car is a pretty piece of work, but what would be the best view for a photograph is rendered quite impossible from the results of restoration showing much too distinctly in the shape of square stone pillars inside the car; the same remark also applies to several views of the great mantapam, while the falling roof has been propped up by plain stone pillars! It would have been easy, one would have thought, to have selected from the heaps of stone work lying all over the courtyard sufficient carved remnants to have built up supporting blocks which would have harmonized well with the rest of the building.

After having breakfasted and finishing our work on Vittalaswamy's temple, we retraced our foot-steps along the path by the river; several river views were secured but, as stated before, the lights and shades were very inferior to what they had been at 9 A.M.

One of us, on completing the capture of a river scene, discovered that the operation had been carefully watched by a family of monkeys at a distance of not more than 10 or 12 feet; they had evidently come to have *their* photographs taken and had accordingly posed themselves in artistic attitudes upon a conical rock, the mother and three or four of the younger members of the family were on the top,

3 or 4 more middle-sized sons or daughters were half way down and the papa and grown-up children at the base of the rock in the fore-ground.

The camera was turned on to them and they settled themselves down just as a human family might have done; they were not in any way frightened and an exposure of two seconds was given without any more signs of movement than would have resulted with one of our own families, in fact not half so much in all probability.

After finishing on the river banks we made our way through the deserted streets of Humpi to the other end of the town where there is a small colony of residents, attracted thither by the vicinity of a large temple, Sri Pampapatiswamy's, which is still visited by a considerable number of pilgrims at certain festivals. This temple has a very large goparam, but has no architectural pretensions nor any attempts at adornment. The visitor will find a notice hanging on the handle of the door of this temple warning all pariahs, Europeans, and other leather-shoe-wearing people that they must not enter the sacred precincts of this temple, under a penalty of Rs. 5, which will be collected to pay for the ceremonies necessary to remove the pollution caused by their presence!

The road ascends somewhat from Humpi Bazaar and at the top a good view of the deserted town is obtained, but the view is much prettier in the morning about 8-30.

About this point there is a small temple where we rested and refreshed (the sun was very scorching from 11 A.M. to 5 P.M.). One of us tried a climb over a huge mass of rocks and succeeded in getting to the top from which a capital view of the river and a cluster of Jain temples was obtainable. The other one, not being so energetic, tried a way *through* the enormous heap of piled-up rocks and succeeded in getting through to the other side. The mass is composed of huge rocks which look as if giants had been throwing stones about until they had accumulated into this enormous pile. When you get into the centre of the pile you get small glimmers of light through crevices a hundred or more feet above you and the scene is one that reminds one of King Solomon's mines and other similar places.

We visited sundry other remains of temples and lastly inspected a huge figure of Narasimha, some 20 feet high. The image is damaged a good bit, the legs are broken off and the arms badly injured; the face is meant to be very ferocious and the head is canopied by a 6 or 7-headed cobra. As a comparison of size, one of us sat at the feet of the image while a plate was being exposed on it.

This ended our work for the day and all that was afterwards done in the way of photography was a visit next morning for the purpose of taking stereos of the palace buildings and Hazara Ramachendraswamy's temple.

There are many other temples and buildings which we did not see or which are not mentioned in these notes, but it is thought that sufficient work has already been pointed out for those who, like ourselves, can only spare two or three days for the trip.

In conclusion, I may mention that if the intending visitor can obtain the services of one of the Tahsildar of Hospet's peons (Chaman Saib by name) he will find him of the very greatest assistance. He knows all the principal buildings by name, speaks sufficient English to understand and to be understood, has some idea of photography and is most energetic and obliging. His only fault was the persistence with which he pointed out the places "where gentlemen always taking photograph" and he objected to one taking views from any other stand-point. He knows a little better now!

Food, beyond mutton and chicken, is not procurable at Kamalapur. It is necessary to take bread for the whole stay or to arrange to have daily supplies sent from Hospet. Tinned fish and other provisions will be found useful, and ice was a most desirable article in the middle of February.

The journey is an inexpensive one. Beyond the railway fares, the only expense is one rupee for each cart each journey to and from Hospet and one rupee a day for each individual (Rs. 1-8 for married couple) per diem for use of bungalow, which is fairly well found and will accommodate three or four people in a satisfactory way. There are two bed-rooms with bath-rooms, no looking-glasses, no mattresses, but two of the three cots have cane seats.

It is hoped that the results of this trip may be shown as Lantern Slides during the next cold season.

We have not entered upon details of historical character; they would have had to be cribbed from some book and everyone can read them up for himself. The buildings date from about 1200 to 1564 A.D.

ACROSTIC FOR THE AMATEUR.

UPRIGHTS.

Optics and chemistry
Father and mother!
(In essence a mystery
One as the other).

Light is the vital spark
Stirring my breast,
Conq'ring the realms of dark
At my behest.

Once a new art I came—
Toy scientific—
Now rich in name and fame
My deeds prolific.

Arts of the olden time
Grew as the nations:
Slowly attained their prime
Reached limitations;

Whilst as the latest art,
(No school professing)
I play a varied part,
Ever progressing.

I, cosmopolitan,
Spread the world over—
Britain to far Japan—
Always a rover.

Evolving day by day
Reach I new stages,
Till a peculiar ray
Puzzles the sages;

Till in my upward flight,
Soar I heroic;
Pinions of black and white
Now polychroic.

LIGHTS.

(1) This apparatus must be trimmed and clean,
(I think you'd best eschew acetylene).

(2) You'll guess this light, I fancy, at a pinch,
Since focal lengths are reckoned by the——

(3) A printing paper you can work with ease:
Its name is a city Japanese.

(4) *The* process in photography, indeed,
That brings you joy or sorrow as you meed.

(5) Pet name for a developer that oft
Gives good results and wonderfully soft.

(6) A graver's term, and useful it will prove
From negatives the freckles to remove.

(7) Necessity to cyclists, but I'll hint
'Tis doubtful as a mountant for a print.

(8) In Greek derivatives our art is strong:
As for this 'light' you'll "find it out" ere long!

(9) A badly working shutter is a pest,
Exposure with the —— are sometimes best.

(10) To reproduce maps, plans and such, we mate
Photography with Solenhofen slate.

(11) Day-break in India, with its greys so pearly,
Should urge you to the field betimes and ——

C. S. M.

OUR HOME LETTER.

Photography is not much good unless it tends to make men happier, wiser, and better, and whether the idle dabbling practised by so many leads towards that end is very doubtful. Anything that helps to make the subject more seriously entertained should be regarded as of paramount importance. Take for example the clubs or unions of those with common interests. How many clubs are there which fully realise the reason of their existence?

It should be their duty to ascertain the essential principles of art as related to photography, to experiment on new materials and investigate new methods; but instead of this it is frequently found that the club is a mere meeting place for those who wish to pass a few idle hours.

Turning, however, to other matters, some of the details in connection with the colour process of M. Chassagne have been published. He has patented five different solutions which are applied in various ways to the print, and which give rise in it to the so-called colours of nature. These colours are, so far as one can see, not much more satisfactory than the three-color process of printing, but it would be unfair to condemn this process until more has been heard about it.

A more important matter, to the photographer with artistic instincts at any rate, is the process known as the Gum Bichromate Method which is occupying a considerable amount of attention in England and on the Continent at present. Some very fine results indeed have been produced in this medium, and one may safely say that it is certainly the most artistic process of the day, though not at all simple, but unsuccessful in all except the most careful hands. Two or three articles appeared on the subject recently in *The Practical Photographer*, to which I refer those interested.

The following is a good metol or hydroquinone developer, which answers particularly well for lantern plates:—

Metol-Hydro Developer.—For transparency and lantern plates—

(*a*)	Water	16 oz.
	Metol	30 grains.
	Sodium sulphite (crystals).	240 „
(*b*)	Water	10 oz.
	Potassium carbonate ...	120 grains.
(*c*)	Pottassium bromide ...	1 oz.
	Water	10 „

To develop: (*a*) 1 oz.; (*b*) 1 oz.; (*c*) 16 to 20 drops.

Can be used repeatedly. Temperature should be between 70° and 75° F.

Too cold a developer will not give density, while a warm developer tends to give fog.

A protest against such terms as "cabinet lenses," "half-plate lenses," and similar expressions is raised by Mr. W. K. Burton in a recent issue of *Photography*, and his contributions on optical matters are always worthy of attention. As it is often necessary to know the approximate "covering" power of a lens, it is well that that term should be more clearly defined, and in Mr. Burton's own words it ought to be understood as the "practical limit," or dimensions up to which the lens may be used for the purpose for which it is intended, without showing a falling off which is actually offensive. This definition is open to discussion, as he admits, since there is "the objection that it is a matter of opinion how much falling off is permissible, or, according to some at least, desirable." Still it would be far better than the vague statements often to be found, which lead to misunderstanding, especially when, for example, a lens said to cover 8½ by 6½ will only properly do so when stopped down to F/22. Mr. Burton also makes a suggestion to opticians which is worth repeating: "All opticians should," he writes, "as some already do, state not only the size of plate that a lens will cover, but the diameter of the circle covered." This provides for foreign or odd sizes of plates. The circle may in some cases be given in terms of the focal length. Thus a good rapid rectilinear, used at full aperture, will generally give "practical definition" over a circle equal to its focal length; most rapid anastigmatics will give definition without appreciable falling off over the same circle—with a large aperture, F/8 or even more, and over a much larger circle with a small stop. MATTHEW SURFACE.

PROCEEDINGS OF THE SOCIETY.

Monthly Meeting held at the Masonic Hall, Mount Road.

Friday, 7th May 1897.

Mr. C. Michie Smith, *President, in the chair.*

NEW MEMBER.

Mr. H. J. Stanley was proposed by Mr. Dunsterville, seconded by Mr. Michie Smith and unanimously elected a member of the Society.

PICTURES FOR THE MONTH.

Pictures of "A Native Conveyance" were shown by Mrs. Leet Palk, Mrs. Shaw and Mrs. McNair, by Surgeon-Major-General C. Sibthorpe, H.H. The Eliya Rajah of Travancore, and Mr. T. Chokanna. The usual criticisms will appear in the next issue of the Journal after the Judges have examined the exhibits.

SUBJECT FOR DEMONSTRATION.

The only member who brought any negatives for exhibition was the President and those which he showed were very good indeed. Mr. Chokanna sent various prints, which however were hardly up to the standard reached in his views of a native conveyance.

H.H. The Eliya Rajah of Travancore sent a copy of a capital picture he had recently taken, which was entitled "A Good Story": the little picture is one of the best that has ever been shown at any of the Society's Meetings and it will find a resting place in the Society's album.

USES OF FORMALIN.

In continuation of his reports (see Journal for 1896, pages 15, 29, and 68) upon the uses of formalin for hardening the surface of gelatine plates, Mr. Dunsterville reported that he had recently been making experiments with Formalin (strength 2 oz. to 24 of water) for printing-out paper; he had washed a batch of prints in two changes of water and then soaked a few of them for three minutes in the above formalin solution, washed them in two more changes of water until all signs of greasiness had gone from the face of the prints and toned them all together in the phosphate bath always used by him; the whole batch was then washed, fixed and washed again and he found that there was absolutely nothing in the colour of the prints to show which had been through the Formalin bath and which had not.

The paper used was Imperial P. O. P. recently sent out direct from the makers; a specimen print which had been through the formalin bath was shown at the meeting and also one which had not been hardened. The tones were exactly the same in every respect.

Dr. VanGeyzel asked that some one might relieve him of the duties of editing the Journal for June and July, and it was arranged that Messrs. Michie Smith and W. H. Oakes would undertake the number for June and the Honorary Secretary the one for July.

It having been found that the illustrations for the Journal obtained locally were not quite satisfactory in quality, it was decided to obtain a supply for six numbers from a well-known firm in England.

NEXT MEETING.

The picture subject for the meeting on 4th June is "A Horse," and that for July will be "CLOUDS."

A vote of thanks to the Chairman terminated the proceedings.

EXTRACTS.

Photography in natural colours. A Comparative Sketch.

By Rev. F. C. Lambert.

It may be well at the outset to remind the readers of this note that the above title at present represents a hope, an ideal, a dream, rather than an accomplished fact—at least, so far as is known to the present writer. For while we have several methods whereby it is possible to make photographs showing objects *more or less* agreeing with their natural colours, yet it still remains that those methods which produce that colour as an inherent constituent of the result are by no means absolutely faithful in this respect, while the other methods giving a closer approach to the question of colour do not really afford the colour by photographic methods. These points will possibly be made more clear as we pass in review some of the more important results and methods whereby they are obtained.

The search for a means whereby the colours of natural objects could be reproduced began before the days of photography. As far back as 1801, Ritter noted that the different portions or colours of the spectrum produced different tints when allowed to fall on chloride of silver. The next year, 1802, Davey produced approximate copies of coloured objects on paper coated with chloride of silver, but he was not able to fix these colours. In 1810 Seebeck continued investigations in the same direction and obtained a darkening effect beyond the ends of the visible spectrum, *i.e.*, in the infra-red and ultra-violet regions. These results were confirmed by Herschell in 1839. About this time Daguerre noticed indications of colour on his plates.

About 1840 Hunt experimented in a similar manner with fluoride of silver, and subsequently with bromide of silver. But the difficulty still remained—how to fix these coloured images, for the same daylight which produced the darkening up to a certain tint would continue its effect on further exposure.

In 1848 Becquerel took a silver plate and obtained a coating of silver chloride, either by placing it in chlorine water, or preferably by connecting it to an electric battery and immersing it in dilute hydrochloric acid, so that the acid being decomposed, chloride of silver of great purity was formed. The plate now exposed in the camera or in a printing frame (under transparent coloured objects) gave results which have been described by those who have seen them as remarkably faithful reproductions of the colours of nature. By means which do not appear to be known, he succeeded further in more or less fixing some of his results.

From this time the number of experimenters in this direction became much more numerous, among them being such conspicuous names as Niepce, Poitevin, Dr. Florent, Fowler, Taylor, Warton-Simpson, Carey-Lea, Kopp, Abney, etc. They have used chloride, fluoride, bromide, iodide, of silver, etc. The silver salt has been supported on glass, paper, metal, etc., in its pure state, also in combination with collodion, gelatine, or similar organic bodies, etc.

Still, the fact remains that these results are only approximations to the colours of natural objects, and there seems no known certain method of fixing these colours so that the finished results may fearlessly be exposed to ordinary bright daylight.

It may be noted that all these experimenters have the same idea more or less in common, viz., that of employing some one substance which will by a sort of sympathetic action absorb and retain any particular tint and hue which falls upon it.

The next set of investigators aimed to produce their effects by an entirely different method. They started with the Young-Helmholtz-Maxwell theory of vision. According to this theory the nerves of the eye affording the sense of colour are not all equally susceptible to the various colours of the spectrum. For example, some of the nerves respond to red or red-yellow or red-orange light—another set respond to the green region, while a third are only effected by the violet portion of the spectrum.

Thus, as one or more sets of these nerves are stimulated—either single or in combination in various degrees and proportions—so arise the various sensations of colour. If then we take a photograph through a transparent medium which permits only, let us say, those rays in the green region of the spectrum to pass, and use a plate specially sensitive to green or greenish light, we shall get a negative where the densest portions correspond to the brightest greens. If now we make a positive we get the clear glass corresponding to the green of nature. If this be viewed behind a green glass we have a picture more or less true to nature so far as greens are concerned. Thus by taking three such pictures corresponding respectively to the three colour-sensitive nerves in the eye, viz., red, green, and blue-violet, and view them simultaneously, we ought to get a representation of the colours of nature more or less. Thus argued Collen about thirty years ago. This method has been explored by various workers, the more notable names being Du Hauron, Vogel, and Ives. The wonderful degree of illusion produced by the stereoscopic pictures of Ives as seen in his latest kromskop has to be seen to be at all realised.

In a similar way three such photographs suitably backed up with their proper coloured glasses can be thrown upon the lantern screen and accurately superimposed with the result that remarkable fidelity to natural colours can be obtained. This, again, Ives has practically demonstrated with conspicuous success.

In a somewhat similar way are mechanically produced certain results roughly classed together under the collective term, "three colour" prints, *i.e.*, prints made by three separate inks, such as red, yellow, and blue, printed one upon the other according to accurate register. The reason that the colours of the inks are red, yellow, and blue, and not red, green, and blue-violet, will appear from the following consideration. If from a negative a collotype plate be made in the ordinary way, it is found that those parts which take the ink are the parts corresponding to the thin or thinner portions of the negative, *i.e.*, these correspond to the half-tones and shadows of nature. If then we make a negative on a red-sensitive plate behind a red screen the thin portions of the negative correspond to the rays which did *not* pass the screen. These colours will be about the blue region of the spectrum. If then a collotype plate be made from this red screen negative the portions of it which take ink correspond, *not* to the reds of nature, but to those colours which did not pass through the red screen. This plate must be therefore printed with a blue-green ink. Similarly the printing plate made from the green screen negative must be printed in red-orange ink; while the plate from the blue-violet screen negative must be printed in a yellow ink. Obviously a large measure of the success of all these various three-colour results depends on duly sensitised plates, correct proportionate exposures, and extremely careful adjustment of the colours of the screens, inks, etc., so that it is obvious that, while the results are interesting and in many ways admirable, yet they are not photographs in colour in the ordinary sense of the term, but rather pictures in colour, the drawing, etc., being done by photography, and the colour subsequently added by human skill and adjustment, etc.,

We now come to the third great division of the subject, which, while it differs somewhat from both the other two, yet is more nearly related to the older methods with the silver plate coated with silver chloride. With this branch of investigation we may especially associate the names of Lippmann, Lumiere, and Valenta among numerous others. Briefly put, the method of working consists in the employment of a glass plate very thinly and evenly coated with a gelatine emulsion of silver bromide and colour sensitised with erythrosin and cyanin. These plates are exposed in the camera, the plate-holder being contrived that the exposure takes place through the glass; and in contact with the film is a layer of liquid mercury. This acts as a reflector, of course. Development takes place in the usual way with a carefully adjusted pyro-ammonia developer, and fixation is done by potassium cyanide. The result, when viewed under proper conditions of light shows some extremely interesting effects. But here again we get some curious, not to say startling, departures from nature; for example, in the colours of the sky, trees, etc. These results, it is extremely probable, are due to the well-known principle in optics known as interference. Briefly put, the matter stands somewhat thus. Suppose the waves of ether producing a certain colour to impinge upon the first surface of a very thin transparent substance—say, the film of a soap bubble—part of this light is reflected, part goes on through the film, arrives at the back surface, and is reflected. Now that reflected from the first surface has, so to speak, got a start of that reflected from the back surface. How much start, will depend upon the thickness of the film. If this corresponds to just half a wave length, then the two will "interfere" one with another so as to counteract each other and produce darkness, *i.e.*, black, or absence of light; but if more or less than half a wave length, then they produce a combined vibration different from that of the first impinging vibration. This actually happens in the soap bubble, and the change of lovely hues is simply due to the change of thickness of the film. This is brought about by various factors, evaporation playing an important part. Observations with the soap bubble show us always the same order of change of colour, and it may be noted that when they get to the dark stage the film is getting only half a wave length thick, and very soon will give way. There are many other natural objects whose colours are in this way due to interference phenomena, *e.g.*, plumage of birds, colour inside many sea shells, *e.g.*, oyster, pearl,

the play of colour in opals, moonstone, etc. The same reason accounts for the rings of colour seen in a printing frame of the box type, when a negative, not quite flat, is in close contact with the front sheet of glass of a different curvature of surface. Newton observed that when a convex *flattish* lens was pressed down on a flat piece of glass he got rings of colour. Hence the phenomena of interference are sometimes spoken of as "Newton's Rings," also referred to as the "Colour of the plates," and may be observed when tar in a thin film is floating on water, fracture of crystals, etc., etc.

Thus it will be seen that the latest claimant for notice, the process of M. Chassagne, differs in certain points from its various predecessors.

At the same time be it observed that while no process produces the colours of nature with absolute fidelity, nor do they produce photographs in colours, *i.e.*, in the ordinary sense of deposits of pigment, yet in all these several processes it is photography pure and simple which makes the drawing. It would thus seem that the dream or ideal of photography in natural colours has not yet been realised.—*The Amateur Photographer.*

Photography and its Applications.

By Capt W. de W. Abney.

I have to recollect in what I have to say to-night that I am not addressing an audience of photographers. What I have undertaken to do is a matter of great difficulty, and one which when I faced it steadily appalled me by its magnitude. The subject is no less than a history of photography and its applications during the Victorian reign. Her Majesty came to the throne in 1837, and it was not till 1839 that photography was discovered by Fox Talbot and Daguerre. It is not my intention to try and discriminate between the parts played by these two great men in the discovery. They each discovered a different process, and about the same time, and these processes are known as the Daguerreotype and the Talbottype. The former is a photograph on a silver plate, the surface of which may be said broadly to have been made sensitive to light by the action of iodine vapour, by the formation of a very thin layer of iodide of silver, which light could decompose according to its intensity. The effect of light was rendered visible by means of the mechanical attachment of metallic mercury deposited from its vapour in different proportions according to the different exposures.

Several examples of these daguerreotypes are upon the table. This is a process by itself, and one which has not gone further in development than it had in the early years of photographic history. It is interesting to remember that in the youth of the daguerreotype a *portrait took half an hour* in bright sunshine to secure—a very different state of things from that to which we shall have to allude presently, where an exposure which lasts one one-hundredth of a second is sufficient to secure a likeness under similar circumstances.

I have said that photography was not invented till 1839, but I must call your attention to the fact that in 1777 Scheele had found that silver chloride discoloured in light, and that in 1814 Nicephore de Niepce had found that bitumen became insoluble after exposure to light in its ordinary solvents, but Josiah Wedgewood, in 1802—a name so intimately connected with pottery—had found that paper washed with silver nitrate was discoloured by the action of light. Wedgewood took silhouettes on paper impregnated on such paper, the silhouettes being white on a black background. But, unfortunately, he had no power to stop the action of light by rendering the white parts insensitive to further action by removing the silver or by adding anything to it which should effect this. Wollastson used silver chloride instead, and I have such a silhouette on glass which I place in the lantern, when it will be seen distinctly at first, and under the action of light the white centre will lose its purity, and if the exposure were continued it would finally vanish.

This was the starting point of Fox Talbot's invention. He impregnated paper with a salt of silver, and found that though the exposure might be short yet he could build up an image by applying to it a solution of nitrate of silver and gallic acid. With the mixture, the gallic acid reduces the silver to the metallic state, and it is precipitated on those parts which have received the action of light, and the more the action the greater the deposit of silver, so that we have on the paper opacity where the light has most acted, and white paper where none has acted, with intermediate blackness between the two according to the intensities of light acting.

This paper produces what is known as a negative, and evidently if we put another sensitive piece of paper in contact with the *negative* we get a print which will, within limits, reproduce the original intensities of light acting, the most intense light being represented by white paper and the least by a black deposit of silver. Broadly speaking, that is talbottype. But here again the difficulty was found of rendering insensitive those parts which had not been acted on by light. Various artifices were tried, but it was not till Sir J. Herschel discovered later that hyposulphite of soda would remove the chloride or iodide of silver that the process was complete.

[A negative and positive were here shown by transmitted light.]

Paper negatives were for some time the fashion, and prints on chloride of silver on paper reigned supreme, when in 1850 Scott Archer discovered the use of collodion on glass, and a wonderful discovery it was. He dissolved iodide of potassium in collodion, and in the film he made iodide of silver by immersing it in a bath of silver nitrate. Collodion is a solution of gun-cotton of a rather peculiar kind, the solvent being a mixture of ether and alcohol. When poured on a glass plate these solvents evaporate and leave a thin layer of gun-cotton, in which is embedded a soluble iodide or bromide, or it may be chloride of sodium (common salt). This film, with the glass plate, is placed in an aqueous solution of nitrate of silver (made from silver and nitric acid), and by chemical decomposition silver iodide or bromide or chloride is formed in the film. This collodion is the substitute for Talbot's paper, but has the advantage that it is free from grain. The layer is sensitive, and after exposure can be developed in the ordinary way with some such reducing agent as gallic acid or an iron salt.

Here we have a plate so coated, and I expose it to magnesium light through this mask, and we will develop it in the lantern for you to see the process on the screen. I put an orange glass in front of the lantern for a reason which you will see presently.

In this negative we have the image produced by means of silver deposited *from a solution of nitrate of silver,* and this we may call the old photography.

The *new photography* is when the image is built up from material *in the film.*

This was exemplified by developing bromide paper with a brush, and explaining how the silver reduced was taken from the solid silver in the film. Here, then, we have the new photography where the image is free from the solid salt.

That the image was built up of particles of silver was shown by a microscopic photograph of about one-eighth of an inch square of a developed plate showing the grain. We must now show you why we use an orange glass to illuminate the plate during development.

[A spectrum was thrown on bromide paper and developed *in situ,* and the spectrum again allowed to fall on the paper, when it was seen the blue rays only acted.]

The next move was made in the direction of simplifying photographic negative making when Bolton and Sayce some ten years after formed bromide of silver in the collodion itself known as bromide emulsion. The nitrate of silver bath was done away with, and we had only to pour on the solution and allow the solvent to evaporate, and we had a sensitive surface.

The final one was an enormous advance, when Mr. Bennett, a tailor in Maddox Street, substituted gelatine for the collodion as a vehicle to hold the salt of silver. The advance was enormous, because it allowed the emulsion so formed to be heated, or treated with ammonia, and this allowed the sensitiveness to be increased to an enormous extent. The plate could be made at least sixty times more sensitive than a collodion plate, and about 10,000 times more so than an early daguerreotype plate. I need not dwell upon this, as you all are acquainted with the hand camera, Kodaks, and other weapons of photographic offence, with which, no doubt, you have often been tormented by your relatives who are amateur photographers.

[The possibilities of the process were shown by moonlight photographs and instantaneous photographs.] We here come to the end of the processes for making ordinary negatives, but in the interval which elapsed between these advances other advances were also made, but in other directions. You have seen that the light which acts upon a plate is practically confined to the blue rays of the spectrum. The plate sees only one colour of light, and translates it as if we look at a colour through blue glass.

On the screen we have some painted pictures, and if we allow the light passing through a blue solution to pass through it, we shall see that the colours are practically reduced to monochrome.

The yellow looks nearly black, the red is black, and the green nearly so. Evidently this is incorrect, and photographic experimentalists endeavoured to correct this, and make the colours appear in their proper brightness in monochrome. In 1874, Vogel found out somewhat accidentally that the addition of certain dyes to the silver salt gave a sensitiveness to some colours to which before it was insensitive.

This was the commencement of orthochromatic photography, through the various stages of which I will not take you, but put on the screen a slide to show to what perfection we have arrived.

[Slide showing a photograph of the spectrum taken on an ordinary and Cadett's "spectrum" plate was here exhibited; also a slide consisting of squares of red, yellow, green, and blue glasses alongside of which were positives of them taken on the above plate.

Slide and four-coloured glasses, and a positive from an ordinary negative taken through these negatives, and from one or two chromatic shown alongside to indicate the correctness of the latter.]

You will see now that we ought practically to be able to translate colour into proper monochrome.

[This was exemplified by slides showing photographs of coloured pictures on the above plates.]

One more slide which is akin to this subject I will show, and that is from a negative by myself, which enabled me to photograph the invisible rays of the spectrum below the red to a wave length of five times greater than the visible spectrum. You know that sunlight is warm. Those rays which principally warm you are invisible, and do not give the sensation of light. It was with these rays that the spectrum photograph was taken—rays which have never been seen by the eye, though felt by the body. A further application is shown by the photograph of the carbon prints of the electric light taken through opaque ebonite, this substance allowing the dark rays to pass.

The next applications of photography to which I shall call your attention are the production of views in the colours of nature. The two first processes I have I can briefly explain. They are dependent of the three-colour theory of vision. If we have a red, a green, and a blue, we can, by a mixture of two or all of them obtain every colour in nature, white included.

[This was exemplified by throwing three patches of red, green, and blue, from the spectrum on the screen and mixing them.]

If we have three negatives, taken practically with what is red, green, and blue light, and from them make three prints, we have three totally different images, but by allowing each of these positives to be projected with the appropriate light with which they were taken and combining them together we have a production which is like nature. Such is Ives's process. The three pictures are now projected separately on the screen, and overlap, and we get the resulting picture in colour.

The next process is that of Dr. Joly. In this, he uses, in front of his plate, a screen, which consists of very closely-ruled lines in trios. The first of the trio has a ruddy tint, the second a greenish tint, and the third a bluish tint. The image in the camera before it reaches the plate has to pass through this parti-coloured screen, with the result that those small portions of the image corresponding to the red lines are taken with the red light, with the green lines green light, and of the blue blue light. The lines are only some one two-hundredth of an inch wide. When developed, we have three distinct negatives on one plate, none, of course, complete over the whole surface. A transparent print is taken of the negative, and lines, coloured red, green, and blue, of the same breadth as the screen used in taking the negative, are placed behind it, and we have the print projected through those lines on the screen. Now the eye is not capable of seeing as separate lines which are close together if they occupy a small angle; consequently when the picture is viewed at a moderate distance all the colours near together blend one into the other, and the eye sees the colour mixture. When viewed close to, what is white at a distance becomes stripes of brilliant red, green, and blue, and so are the intermediate colours, the brightness of each colour being restricted according to the colour of the original.

The last process is by Mr. Wallace Bennetto, and I can offer no explanation how he gets his colours. At present it is a secret, but by it he gets very beautiful results. He has kindly consented to show some of them.

Printing Processes.

I have already told you that Fox Talbot used chloride of silver to obtain his prints from his negatives, and albumen was subsequently used to hold the chloride on the surface of the paper, and it is a means of portraying "those whom we love," even to the present day. Very beautiful prints, but, as we all know, they are very liable to fade from atmospheric contaminations.

A permanent process which was next introduced was known as the carbon process. In brief outline it is as follows: Paper is coated with gelatine impregnated with pigment of some kind, and made sensitive to light by bichromate of potash. The action of light on this is to render the gelatine insoluble in hot water. If these various degrees of light act on the paper as they do through a negative the gelatine has different degrees of insolubility from the face. If we can wash away the soluble gelatine, we shall have a picture left in gelatine and pigment. This is done by squeegeeing the print on to glass, and then immersing in water tearing away the paper and washing, in hot water, as we might do here if we had the time.

A more recent and very popular printing process is the platinotype. Paper is coated with a sensitive salt of iron mixed with a platinum salt. The light will reduce the iron salt to a state that when oxalate of potash is applied to it it reduces the platinum salt to metallic platinum in contact with it, and a print is developed.

[Several platinum prints were developed before the audience with a brush, and the difference between the development of a platinum print and a sensitive plate was explained.]

Gelatine and bichromate of potash when coated on a plate and dried not only become insoluble in hot water, but those parts acted upon by light refuse to take up water, the refusal being proportional to the light acting. If a greasy ink be rolled on such a surface, the ink takes selectively, and when paper is pressed on it we have a print on its removal in greasy ink on the paper. By such a process the collotypes shown were produced.

To photogravure I cannot allude at any length, though it is an old process worked at by Fox Talbot. Etching fluids will permeate a gelatine plate coated on copper or zinc in proportion to the amount of light acting, or an electrotype may be taken from a gelatine image of which the soluble part has been washed away, and we have plates from which prints may be taken by the copperplate printing press.

Specimens of all the process now at the lecture have been supplied by the Autotype Company, the Swan Company, and the Platinotype Company, and to them I return my hearty thanks for the exhibits.

The last printing process is perhaps the most interesting, for it is in common use for book illustrations, and in fact for newspapers and magazines. It is the production of type blocks from negatives, and one of the earliest, if not the earliest, was that of Mr. Ives. If we endeavoured to make a block from an ordinary negative we should find we have no end of difficulties. If we etched it properly, the greater and lesser depths of etching would in the printing press come out of the same blackness. By placing a screen of lines closely ruled together on glass, fairly close to the negative, we introduce a means of breaking up the even gradation of the surface, and owing to the effect of these interruptions we get half-tone and shade in various thicknesses of lines, and these can be etched and form a block.

(To be continued in our next issue.)

EXHIBITS FOR APRIL.

SUBJECT:—"*A Bicycle in motion.*"

J. W. C.—Madras.—Fairly sharp, but shutter not quite fast enough for an object so near. Printed on spoiled paper. A front view would have been more interesting.

R. V.—Travancore—No. 1 is a fair photograph but a poor print, while No. 2 is out of focus and very flat.

A. W.—Ootacamumd.—The cyclist was apparently going very slowly, but even so the exposure was too long. Print spotty, badly cut and mounted.

Mrs. L. M. N.—Ennur.—No. 1 is very fair but under-exposed, while the tilting of the camera makes it seem as if the cyclists were coming down a steep hill. No. 2 should not have been sent in; it is quite out of focus.

COMPETITIONS.

(Open only to members of the Society.)

SUBJECT FOR SPECIAL COMPETITION IN MAY:—*An Architectural Study.*

SUBJECT FOR MONTHLY COMPETITIONS IN { JUNE.—*A Horse.* JULY—*Clouds.*

RULES.

1. *Two Special Competitions shall be held, in each year, in addition to a monthly competition.*

2. *The Committee shall select the subjects for the Special Competitions, and notice of the selected subjects shall be announced in the Society's Journal in February and in July of each year. The subject for each monthly competition shall be selected two months in advance by the members present at the monthly meeting, and shall be notified in the next issue of the Society's Journal.*

3. *Pictures, &c., competing for Prizes at the Special Competitions must reach the Secretary by the last day of January and of May, and those competing at the monthly competitions must arrive in time to be shown at the monthly meeting.*

4. *Prizes will consist of Silver and of Bronze Medals, and of Certificates of Merit.*

5. *Not more than one Silver and one Bronze Medal shall be given at each Special Competition, and one Silver and one Bronze Medal may also be given at these competitions for excellence in copying, enlarging, lantern slides, or any other special branch of photography. One Silver and one Bronze Medal shall be awarded half-yearly to the exhibitors who obtain the highest and the next highest marks respectively at the monthly competitions. The number of Certificates of Merit granted at each competition is left to the discretion of the Judges.*

6. *A member may receive only one Silver and one Bronze Medal in the special, and one Silver and one Bronze Medal in the monthly, competitions, held during the same year; but should a member who has been adjudged a medal be disqualified under this rule from receiving it, he shall be given a Special Certificate instead, marked 1st or 2nd Prize.*

7. *A Special Committee of three members shall be appointed Judges by the General Committee to carry out, subject to these Rules, all arrangements connected with the competitions.*

8. *The Special Committee shall be appointed after the Annual General Meeting in January, and shall hold office for one year, and any vacancy occurring will be filled up by the General Committee.*

9. *The Special Committee shall decide upon the merits of the pictures, &c., sent in for competition, and their decision shall be final. The system of judging the monthly exhibits shall be by awarding marks, a record of which shall be kept by the Judges, the marks being totalled and the results declared half-yearly. For this purpose, only the three highest marks awarded at each competition to each competitor shall be recorded, but not the aggregate marks gained by each for a number of exhibits.*

10. *If any member of the Special Committee is a competitor, the General Committee shall appoint a non-competing member to act as Judge at that competition instead of the competing member.*

11. *No exhibit shall compete twice, but pictures, &c., already exhibited elsewhere, may be sent in for the competitions.*

12. *Lantern slides sent in for competition shall be in sets of six, and shall be judged upon the screen.*

13. *The Special Committee shall not award any Prizes or Certificates, unless they consider the exhibits to be worthy of such distinction.*

14. *Each competing exhibit shall be the entire work of the exhibitor, and when sent in shall be accompanied by a Certificate in the annexed form:—*

> *"The (1) Arranging, (2) Exposing, (3) Developing, (4) Retouching (if any), (5) Printing and (6) Trimming and Mounting were done by me without assistance."*
>
> ______________________
>
> *Member, A. P. Socy. of Madras.*

15. *All pictures for the Special Competitions shall be mounted, and may, at the competitor's option, be framed but not glazed. Those for the monthly competitions need not be mounted, but should be trimmed.*

16. *Each competing picture should have a name or title, which should indicate the nature of the subject.*

17. *No competitor shall be allowed to send in more than six pictures to compete for any particular Prize, but the same member may compete in all branches specified in Rule 5.*

18. *The pictures gaining 1st and 2nd Prizes at the half-yearly competitions, and the best pictures sent for the monthly competitions, shall, when practicable, be reproduced in the Society's Journal.*

19. *To give up-country members an opportunity of seeing the competing pictures at the special competitions, the pictures shall be circulated to all members of the Society, not residing in Madras, who apply to see them. As this arrangement can only be carried out by the cordial co-operation of the members themselves, they are expected to forward the pictures without delay to the next member, and to send one of the accompanying post-cards to the Secretary, so that by this means the progress of the pictures may be traced.*

List of Members whose Dark Rooms are available for use by Members of the Madras Amateur Photographic Society.

J. L. VANGEYZEL, Dare's Gardens, Chetput.
T. P. S. NAGARATNAM, 47, Malayappen Street, Black Town.
E. MAENNIG, Buckingham House, Tranquebar.
J. CHOKANNA, AMILDAR, Bowringpet, Mysore State.

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FOR SALE.—A half-plate Improved Simplex Camera, with Taylor, Taylor, and Hobson's R. R. lens fitted with iris diaphragm, 3 double dark slides and focussing cloth, all in water proof case. The kit is as good as new, having been used only 3 or 4 times. To go with the above.—3 half plate printing frames, 4 dishes, dropping bottles, 3 glass measures, 100 negative Envelopes, Ewing's Hand-book, Wilson's Cyclopedia, Bothamley's Manual, Price—Rs. 225—No offers. Apply to Dr. VanGeyzel, Chetput, Madras.

NOTICES.

Members of the Madras Amateur Photographic Society are permitted to use this column free of charge for two insertions of each advertisement—all subsequent insertions of the same being chargeable at 2 annas a line. When an advertisement becomes liable to this charge, it will not be inserted unless a postal order or stamps to the value of the charge are previously sent, addressed to Graves, Cookson and Co., Scottish Press, Mount Road Branch, Madras. Advertisements received up to the 5th of each month will be inserted in the next issue of the Journal; those received after this date will be held over for the subsequent issue.

Subscribers, and others who are not regular dealers may make use of this column for advertisements by paying at the rate of 3 annas a line.

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Entrance Fee, Rs. 5.—Annual Subscription, *for Resident Members Rs. 15, for Up-country Members, Rs. 12. Members joining after 30th June pay Half-year's Subscription.*

Candidates for Election—*should be proposed by one member and seconded by another; and they will be bullotted for at the following meeting.*

Ordinary Meetings—*of the Society are held on the first Friday of each month at 6 p.m. and members are at liberty to introduce visitors.*

Letters to the Editor—*should be addressed care of Messrs. Graves, Cookson & Co., Scottish Press, Mount Road Branch, Madras.*

Letters to the Honorary Secretary—*should be addressed to F. Dunsterville, Esqr. Rayapuram, Madras.*

Letters to the Honorary Treasurer and Remittances—*should be addressed V. G. Lynn Esqr. care of Messrs. Best & Co., Madras.*

Communications regarding the issue of the Journal—*should be addressed to the Publishers.*

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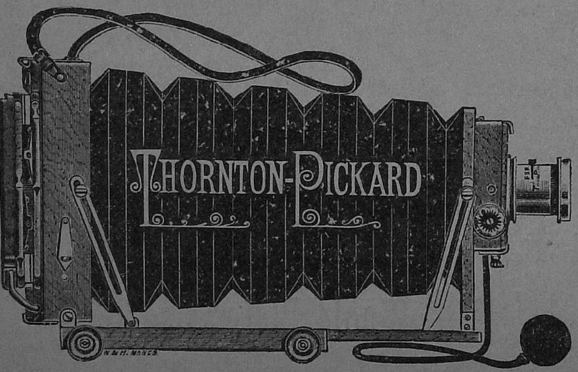

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